REMARKS

Applicants respectfully request reconsideration and withdrawal of the rejection of the claims.

Claims 1-6 currently are pending. By way of the present response, claim 4 is amended to broaden the claim in some respects. More particularly, claim 4 has been amended to recite, "if an amplitude of fluctuation is equal to or greater than the stipulated value, said passenger presence determination means compares the value measured by the weight measurement means against a first threshold value to determine the presence of a passenger...."

Turning now to the rejection, pages 2-5 of the Office Action include a rejection under 35 U.S.C. §103(a) of all pending claims 1-6, as allegedly being unpatentable over Fujimoto et al. (U.S. Patent Application Publication No. 2002/0024257 A1). This rejection is respectfully traversed, as the Fujimoto et al. publication fails to teach or suggest each and every feature set forth in Applicants' claims.

The present invention relates to a vehicle passenger detection device that detects a presence of a passenger in a seat. It addresses problems associated with the occurrence of mechanical hysteresis in vehicle passenger detection devices. For instance, mechanical hysteresis can occur when a weight measurement device for measuring the load on a vehicle seat does not return to the "zero position" as its original position a when a passenger exits the vehicle. Occurrences of such mechanical hysteresis often lead to inaccurate measurements because a load continues to be input to the load measurement device even though the passenger is no longer present in the seat.

In one aspect of the invention broadly encompassed by Applicants' claim 1, a vehicle passenger detection device includes weight measurement means provided with a weight sensor and disposed between a seat and floor of a vehicle. The weight measurement means measures the load applied to the seat. The device also includes fluctuation amplitude detection means that detects the amplitude of fluctuation in values measured by the weight measurement means, correction means that applies a negative correction to the value measured by the weight measurement means when the fluctuation amplitude is smaller than a stipulated value, and a passenger presence determination means that determines the presence of a passenger upon the seat by comparing the value measured by the weight measurement means against a stipulated threshold value.

With the present invention having such a constitution, when the fluctuation of the value measured by the weight measurement device is determined to be less than a stipulated amplitude, residual hysteresis is assumed to be present, so the conditions for determining the presence of passengers are changed and the determination of the presence of passengers is performed under conditions with the effects of mechanical hysteresis eliminated. Thus, the detection of passengers can be performed accurately even in a range easily affected by mechanical hysteresis.

It is respectfully submitted that the Fujimoto et al. publication does not teach or suggest to correct a value measured by a weight senor of a weight measurement means, much less a passenger presence determination means that compares the value measured by the weight measurement means against a stipulated threshold value as claimed.

In setting forth the rejection of claim 1, the Examiner acknowledges that the Fujimoto et al. publication fails to teach or suggest a fluctuation amplitude detection means that detects the amplitude of fluctuation in values measured by the weight measurement means, and correction means that applies a negative correction to the value measured by the weight measurement means when the fluctuation amplitude is smaller than a stipulated value. (See, lines 10-12 of section 1 on page 2.) Next, with reference to paragraphs 0037, 0038, 0057-0059, and 0085-0089, the Examiner asserts, in the paragraph spanning pages 2-3, that the Fujimoto et al. publication:

> "[C]learly teaches the vehicle passenger detection includes 4 load sensors (24a-24d) communicate with a seat belt (15), an electronic control unit as ECU (12), airbag module (14), indicator (16) to monitor at all time the weight of the passenger which to compare the percentage of increase or decrease of the load (W1-W4) as a child (60) or adult passenger (13) for controlling airbag module (14) in accurately conditions as non-activate or activate the airbag module (14) when the vehicle is in impact/collision [sic]."

From these statements, the Examiner concludes, "it would have been obvious ... to employ the system of Fujimoto et al. for measuring the weight of passenger and controlling the airbag module in accurately conditions when the vehicle is in collision." (See, lines 6-9 of page 3.)

It is respectfully submitted that the Examiner's statements in the rejection do not establish a *prima facie* case of obviousness because they fail to provide any evidence from the prior art that would have taught or suggested the claimed correction means that applies a negative correction to the value measured by the weight measurement means when the fluctuation amplitude is smaller than a stipulated value, which the Examiner acknowledges to be missing in the Fujimoto et al. reference. Additionally, the Examiner fails to provide any motivation from the prior art that would have led one of ordinary skill in the art to modify the Fujimoto et al. system to arrive a device including, *inter alia*, correction means and passenger presence determination means as set forth in Applicants' claim 1. The rejection, therefore, fails to meet at least two required criteria for establishing a *prima facie* case. See MPEP §2143. Accordingly, the rejection is improper and should be withdrawn.

Claims 2 and 3 depend from claim 1 and are therefore allowable at least for the above reasons, and further because they each set fort a combination reciting additional features.

In accordance with another aspect of the invention, the value measured by a weight measurement means is compared with a first threshold value or the hysteresis threshold value depending on the amplitude of the fluctuation in values measured by a weight measurement means. Claim 4 encompasses this aspect of the invention. For example, claim 4 recites, among other features, "if said amplitude of fluctuation is equal to or greater than the stipulated value, said passenger presence determination means compares the value measured by the weight measurement means against a first threshold value to determine the presence of a passenger, and if the value measured by said weight measurement means is smaller than a stipulated value, the passenger presence determination means compares the value measured by said weight measurement means against a hysteresis threshold value greater than the first threshold value to determine the presence of a passenger." It is respectfully submitted that the Fujimoto et al. publication does not suggest this claimed subject matter.

In setting forth the rejection of claim 4, the Examiner acknowledges that Fujimoto et al. does not mention "a fluctuation amplitude detection means and also (See, page 4, lines 3-6.) The Examiner goes on to state, identically, what was stated in connection with claim 1 and reproduced above. In response, Applicants first note that the language "correction means" is not recited in claim 4. Additionally, there is not teaching in Fujimoto et al. of the concept of comparing a load value measured by a weight measurement means with one of two threshold values depending on the amplitude of the fluctuation in value measured by the weight measurement means. Furthermore, the Examiner does not address these claimed features, much less show where in the prior art they exist, and why one of ordinary skill in the art would have been motivated to modify the Fujimoto et al. patent to meet the combination of features recited in claim 4.

As pointed out above, it is the Examiner's burden to establish a *prima facie* case of obviousness, which must include a showing, from the prior art, of all claimed features and motivation for modifying a reference to include any claimed features missing in the reference. Such a showing, however, is not found in the rejection.

Claims 5 and 6 depend from claim 4, and thus are allowable for the above reasons because each encompasses all the features of claim 4. Additionally, these claims recite combinations including additional features not taught or suggested by the Fujimoto el. publication.

In summary, the rejection merely discusses the claim limitations in general terms, with broad, vague references to the Fujimoto et al publication. It fails to identify how the reference teaches or suggests a number of the specific features of the claims. Absent such a showing, withdrawal of the rejection is warranted.

The application is believed to be in condition for allowance. Prompt notification of the same is respectfully requested.

Respectfully submitted,

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